Amendm nts

In the Claims:

Please cancel claim 19 without prejudice or disclaimer. Please add new claim 25, support for which may be found in the specification on page 19, lines 18-23.

Please amend the remaining claims as follows:

1. (Previously Amended) A process for identifying inhibitors of a eukaryotic potassium channel, in which
   a) a mutated S. cerevisiae cell is used which does not express the three endogenous potassium channels TRK1, TRK2 and TOK1;
   b) a eukaryotic potassium channel is expressed heterologously in this mutated S. cerevisiae cell;
   c) the mutated S. cerevisiae cell is incubated together with a substance to be tested; and
   d) the effect of the substance to be tested on the eukaryotic potassium channel is determined

   wherein a decrease in the transport of potassium across the eukaryotic potassium channel indicates that the substance is an inhibitor of the eukaryotic potassium channel.

2. (Original) The process as claimed in claim 1, wherein the genes TRK1, TRK2 and TOM are switched off in the mutated S. cerevisiae cell (Otrk1, Atrk2, Atok1).

3. (Previously Amended) The process as claimed in claim 1, wherein the eukaryotic potassium channel is a human potassium channel.

4. (Currently Amended) The process as claimed in claim **[3]1**, wherein the eukaryotic potassium channel is a HERG1, Kv1.5 or gpIRK1.

5. (Previously Amended) The process as claimed in claim 4, wherein the eukaryotic potassium channel is mutated.

6. (Previously Amended) The process as claimed in claim 5, wherein the eukaryotic potassium channel is present in a yeast expression plasmid.

7. (Previously Amended) The process as claimed in claim 6, wherein the mutated S. cerevisiae cell expresses constitutively a growth reporter.

8. (Previously Amended) The process as claimed in claim 7, wherein a substance to be tested, which has an effect on the eukaryotic potassium channel, inhibits the growth of the mutated S. cerevisiae cell.

9. (Previously Amended) The process as claimed in claim 7, wherein the effect of a substance to be tested on the eukaryotic potassium channel is determined by measuring the cell count of the mutated S. cerevisiae cells.

10. (Original) The process as claimed in claim 9, wherein the cell count is determined via the
fluorescence or luminescence of a constitutively expressed growth reporter.

11-19. (Cancelled)

20. (Previously Amended) A process of identifying activators of a eukaryotic potassium channel, in which
   a) a mutated S. cerevisiae cell is used which does not express the three endogenous potassium channels TRK1, TRK2 and TOK1;
   b) a eukaryotic potassium channel is expressed heterologously in this mutated S. cerevisiae cell;
   c) the mutated S. cerevisiae cell is incubated together with a substance to

be tested; and

d) the effect of the substance to be tested on the eukaryotic potassium channel is determined

wherein an increase in the transport of potassium across the eukaryotic potassium channel indicates that the substance is an activator of the eukaryotic potassium channel.

21. (Previously Amended) A process of identifying activators of a eukaryotic potassium channel, in which

a) a mutated S. cerevisiae cell is used which does not express the three endogenous potassium channels TRK1, TRK2 and TOK1;

b) a eukaryotic potassium channel is expressed heterologously in this mutated S. cerevisiae cell;

c) the mutated S. cerevisiae cell is incubated together with a substance to be tested in the presence of an inhibitor of the eukaryotic potassium channel; and

d) the effect of the substance to be tested on the eukaryotic potassium channel is determined

wherein an increase in the transport of potassium across the eukaryotic potassium channel indicates that the substance is an activator of the eukaryotic potassium channel.

22-24. (Cancelled)

25. (New) The process as claimed in claim 3, wherein the eukaryotic potassium channel is a Kir2.1 or IRK1.